NEW YORK STATE
DEPARTMENT OF TRANSPORTATION
MATERIALS BUREAU

Inspection of Steel Reinforcing Bars

SCOPE

This method describes specific procedures for the inspection control of steel reinforcing bars used in portland cement concrete for Department work and supersedes all previous instructions issued for this material. These procedures insure that Department Specifications have been adhered to and that evidence of acceptability of the bars has been conveyed to the site of the work.

GENERAL METHOD

Samples are secured by a Department representative from each lot offered for eventual shipment by suppliers to Department work. These samples are submitted to the Materials Bureau for test. Shipment of material to the project site may be made only after notification of acceptance by the Materials Bureau has been received by the Department representative. At the time of sampling, identification tags are affixed throughout the sampled lot to facilitate the maintenance of identity of the material through the fabricating procedures, during shipment and on arrival at the site of the work.

DEFINITION OF TERMS

1. SUPPLIER - A reinforcing bar shop which receives mill-banded bundles of bars from manufacturing locations and ships bars, with or without fabrication, direct to Department work.

2. MATERIALS BUREAU - A facility of the New York State Department of Transportation located in Albany, N.Y.

3. INSPECTION AUTHORITY - An office designated by the Materials Bureau as responsible for inspection control on behalf of the Department at specific suppliers.

4. INSPECTOR - An individual employed by the Inspection Authority and approved by the Materials Bureau to function on inspection assignments on behalf of the Department.

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DEFINITION OF TERMS (continued)

5. LOT - A lot shall consist of that specific quantity of any or all sizes of reinforcing bars offered by a supplier for sampling and, upon acceptance by the Department, eventual shipment direct to Department work during a period of time prior to the stipulated expiration of the acceptance. The quantity of bars in any one lot may be at the discretion of the supplier consistent with his ability to stock and fabricate the bars in a manner that assures the Department at all times of the actual identity of the bars. However, in no case shall more than the following number of heats of any one bar size be contained in a lot.

Quantity in Heat	Maximum Number of Heats
Excess of 100,000 lbs.	3
100,000 lbs. or less	6

The Department may at any time limit the maximum quantity of bars in a lot upon verbal notification to the supplier by the Materials Bureau. Material from accepted lots may not be shipped to non-Department work without written permission of the Materials Bureau.

6. SAMPLE - A sample shall consist of two (2) specimens of each heat of each size bar in a lot. The length of each specimen shall be two (2) feet for all sizes except 14S and 18S which shall be five (5) feet long.

7. ACCEPTANCE - A notification of acceptability of a lot issued by the Materials Bureau and limited as follows:

Date of Sample	Expiration Date *
April 1 - October 1	October 31 (same year)
October 1 - April 1	4 weeks after acceptance date

* The acceptance for a lot may expire at any time that maintenance of identity is not to the satisfaction of the Department or its representative.

DEFINITION OF TERMS (continued)

8. FORMS - The following forms are published and issued by the Department.

a. BR-240 - Sample and Acceptance Transmittal.

This form transmits the inspectors sample information to the Materials Bureau and upon validation conveys acceptance action to the inspector. Detailed instructions for proper completion and transmittal are contained in Materials Method N.Y. 18.1.

b. BR-241 - Sample Transmittal Envelope.

This is a heavy duty envelope used to contain BR-240.

c. BR-108 - Rush Tag.

This form has the address of the Materials Bureau printed on it and may be used on the outside of sample bundles as a shipping tag.

d. BR-131 - Steel Reinf. Tag.

This form is a yellow identification tag used on reinforcing bars to assist the Inspector in maintaining identity of the material.

e. BR-195 - Shipment Authorization.

This form accompanies all shipments by the supplier to the project. It indicates that each shipment was authorized by the Inspector. Detailed instructions for use of this form are contained in Materials Method N.Y. 18.2.

f. BR-11 - Waterproof Envelope.

This envelope is used to contain BR-195.

STEPS IN PROCEDURE

Responsibility	Action
Supplier	1. Prepares an itemized list of project numbers for all Department work to be serviced by direct shipment from the lot to be offered for sampling.
	a. Material scheduled for shipment to off-project locations which utilize bars in precast concrete items are to be noted on this list by Company name and location rather than project number.
	2. Obtains certified mill test reports to cover all material in the lot to be sampled.
	a. This report shall list the results of physical and chemical tests performed by the manufacturer for all size bars and heats in the lot.
	3. Prepares a breakdown listing the total approximate poundage of each size bar and heat in the lot.
	a. This total should not be more than the total poundage required for all contracts on the project list.
	4. Notifies the Inspection Authority that orders for reinforcing bars have been received for use on Department projects and that the lot is ready for sampling.
Inspection Authority	5. Schedules an inspection call.
	6. Assigns an inspector to make the call.

Inspector

7. Reviews itemized list of Department project numbers for validity.

8. Reviews certified mill test reports for compliance with NYSDOT Material Designation M17-"Bar Reinforcement for Cement Concrete".

   a. Inspector must have available a copy of ASTM Designation A15 (latest edition) for this purpose.

9. Places these documents in his files after satisfaction that they contain all required information.

   a. If these documents are not satisfactory to the inspector, he will not sample the material.

   b. These documents are to be maintained in the Inspection Authority files for a period of time as determined by the Materials Bureau.

10. Receives the poundage breakdown by size and heat number from the supplier. The approximate weights shall be so noted as "approx". in all paperwork where such information appears.

    a. It is not a responsibility of the Inspector to examine or approve bar lists and/or cutting sheets. These are not a part of the Department's acceptance or payment procedure.

11. Assigns lot numbers in accordance with the definition of a lot to the material offered by the supplier.

    a. Consecutive lot numbers starting with "1" at the beginning of each calendar year are to be used.

Inspector (continued)

12. Selects the samples personally, in accordance with the definition of a sample and supervises their cutting.

    a. Any samples cut before the Inspector reports to the warehouse or samples not actually selected from material to be fabricated for Department projects are NOT acceptable.

13. Affixes a sufficient number of identification tags, Form BR-131, throughout the lot to suitably identify the bars through fabrication and shipment to the project site.

    a. The lot number, heat number and bar size shall be entered on each tag.

    b. Material not identified to the inspectors satisfaction will not be tagged.

14. Ties the two (2) specimens in each sample and securely affixes identification tag BR-131 to each pair.

    a. The lot number, bar size, heat number and manufacturer are entered on each tag.

15. Completes Form BR-240 in accordance with Materials Method N.Y. 18.1 except that the space for Contract No. may be left blank.

16. Places Form BR-240 inside envelope BR-241.

17. Bundles all samples for each lot together with envelope BR-241 containing BR-240 and securely wraps them in burlap or heavy paper.

Inspector (continued)

17. a. Care shall be taken not to mutilate Form BR-240.

    b. When necessary, more than one bundle may be used for a lot.

    c. Care shall be exercised to see that the barbed ends of the wrapping wire used to secure the bundle do not protrude.

18. Wires a shipping tag securely to the outside of the bundle.

    a. Form BR-108 is provided for this purpose, however, any tag showing the same address may be used.

19. Delivers the bundled samples to a Railway Express or commercial truckers office for transmission "collect" to the Materials Bureau.

    a. At the option of the supplier and with the agreement of the inspector, the sample package may be transmitted to the Materials Bureau by the supplier at his expense and by his means. Any package submitted in this manner must be sealed by the inspector before being turned over to the supplier.

       The shipping tag (BR-108 or a similar tag) shall indicate the following: "This package contains Lot No._____, supplied by_____ and was sealed by_____on_____. The Red Mylar Tape provided by the Department to its inspection staff for sealing purposes is to be used. One Mylar tape shall be wrapped around or over the twisted ends of wire or the clips of bands used to secure the package. One of these tapes shall also connect to the shipping tag.

Supplier

20. May commence fabrication, at his own option, after sampling has been accomplished but no shipment may be made until notification of acceptance has been conveyed to the supplier by the inspector.

Materials Bureau

21. Performs required tests.

    a. Acceptance action will be based on the results of such tests.

22. Validates Form BR-240.

23. Issues Form BR-240 to the Inspection Authority as described in Materials Method N.Y. 18.1.

    a. Telephone requests to the Materials Bureau in advance of normal notification will be honored only when received from the Inspector.

Inspection Authority

24. Received validated yellow and green copies of Form BR-240 from the Materials Bureau. The yellow is retained by the Inspection Authority and the green advanced to the Inspector.

25. Notifies supplier of action taken by the Materials Bureau.

26. Arranges for inspection call to supervise loading and document shipment.

Inspector

27. Removes identification tags (BR-131) from any REJECTED material to prevent its being included in shipment.

28. Ascertains that the material to be prepared for shipment is that which was previously sampled and subsequently ACCEPTED and is destined to a project included on the itemized list prepared for that lot by the supplier.

Inspector (continued)

29. Ascertains that a sufficient number of identification tags remain on the material suitably retaining identification as to lot number through to the project site.

    a. If the Inspector, in his own judgement, experiences undue delay by the supplier in preparing the material for shipment in a manner to his satisfaction, he shall reschedule shipment inspection for a later time.

    b. If at any time, the Inspector is in doubt as to maintenance of identity of the material, he may reject all of the questionable portion of the lot or shipment.

30. Completes shipment notice, Form BR-195, in accordance with Materials Method N.Y. 18.2, only upon satisfaction that the proper material has been loaded.

    a. This form accomodates data for up to three (3) different lots per shipment. When a single shipment contains more than three lots, multiple sets of BR-195 are to be completed and identified as "set 1 of 2","set 2 of 2", etc.

31. Encloses BR-195 in a waterproof envelope, Form BR-11.

32. Presents the envelope BR-11 with the BR-195 enclosed to the supplier for transmission with the driver of the vehicle to the project site.

Inspector (continued)

33. Surveys material remaining in previously accepted lots to ascertain that no shipments have been made without his knowledge and that identity of the material is being maintained.

    a. A survey of previously accepted lots should be made each time the Inspector visits a supply location.

    b. Any discrepancies or deficiencies together with the action taken shall be noted in the Inspector's diary.

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